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IN THE CLAIMS:

1 (Previously Presented) A method of preventing interference in a communication system comprising the steps of:

generating a fixed reuse pattern in a service area from a high altitude communications device, said pattern having a plurality of first resource cells and a second resource cell having a resource different than the plurality of first resource cells;

selectively suppressing a side lobe of a first beam having a first resource by selectively reshaping the antenna surface at interference locations and maintaining a shape of the antenna in non-interference locations to form a suppressed portion and a non-suppressed portion so that said non-suppressed portion aligns with said second resource cell and a side lobe suppressed portion of the first beam aligns with other beams having the first resource.

2-3. (Canceled)

4. (Original) A method as recited in claim 1 wherein said first resource and said second resource comprise a frequency.

5. (Original) A method as recited in claim 1 wherein said first resource and said second resource comprise polarization.

6. (Original) A method as recited in claim 1 wherein said first resource and said second resource comprise an orthogonal code.

7. (Original) A method as recited in claim 1 wherein said high altitude communication device comprises a satellite.

8. (Original) A communication system as recited in claim 1 wherein said high altitude communication device comprises a stratospheric platform.

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9. (Previously Presented) A communication system comprising:
a high altitude communication device having an antenna for generating a first plurality of beams, each of said plurality of beams having a first frequency resource, a plurality of main lobes directed to one of a first plurality of cells and a plurality of side lobes and a second plurality of beams having a second resource directed to one of a second plurality of cells,

said antenna selectively shaped so that said side lobes of said first plurality of beams are selectively suppressed in directions of other beams of said first plurality of cells having said first resource and said side lobes are unsuppressed in the second plurality of cells.

10. (Original) A communication system as recited in claim 9 wherein said high altitude communication device comprises a satellite.

11. (Original) A communication system as recited in claim 9 wherein said high altitude communication device comprises a stratospheric platform.

12. (Original) A method as recited in claim 9 wherein said first resource and said second resource comprise a frequency.

13. (Original) A method as recited in claim 9 wherein said first resource and said second resource comprise polarization.

14. (Original) A method as recited in claim 9 wherein said first resource and said second resource comprise a code.

15. (Previously Presented) A method of forming a communication system comprising the steps of:

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generating, with an antenna, a fixed reuse pattern having a maximum capacity having a first beam having a first resource and a first plurality of beams having the first resource;

generating, with the antenna, a second plurality of beams having a second resource different than the first resource;

identifying interference locations of said first beam relative to said plurality of second beams;

selectively reshaping an antenna to selectively suppress interference at the interference locations with the first plurality of beams and maintaining the shape of the antenna in non-interference locations, and

maintaining the antenna to not suppress interference at non-interference locations.

16. (Canceled)

17. (Previously Presented) A method as recited in claim 15 wherein said interference locations correspond to a side lobe of said first beam.

18. (Previously Presented) A method as recited in claim 15 wherein said first resource and said second resource comprise a frequency.

19. (Original) A method as recited in claim 15 wherein said first resource and said second resource comprise polarization.

20. (Original) A method as recited in claim 15 wherein said first resource and said second resource comprise an orthogonal code.

21. (Previously Presented) In a fixed cell communication system generating a fixed reuse pattern using an antenna, a method of reducing interference between beams having side lobes, comprising:

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selectively performing side lobe suppression only for beams using a same communication resource and maintaining a shape of the antenna to not suppress interference for beams using a different communication resource.

22. (Canceled)

23. (Currently Amended) A method as recited in claim [[22]] 21, wherein generating a fixed reuse pattern comprises generating the fixed reuse pattern at the high altitude communication device is a satellite.

24. (Currently Amended) A method as recited in claim [[22]] 21, wherein generating a fixed reuse pattern comprises generating the fixed reuse pattern at the high altitude communication device is a stratospheric platform.